



JOINT VENTURE HSV-X1

Bollinger / Incat USA, L.L.C. has signed a charter contract with the United States military to supply a high-speed Wave Piercing Sealift Catamaran for up to two years. The charter, with a value over US \$20 million, was won over competition from around the world.

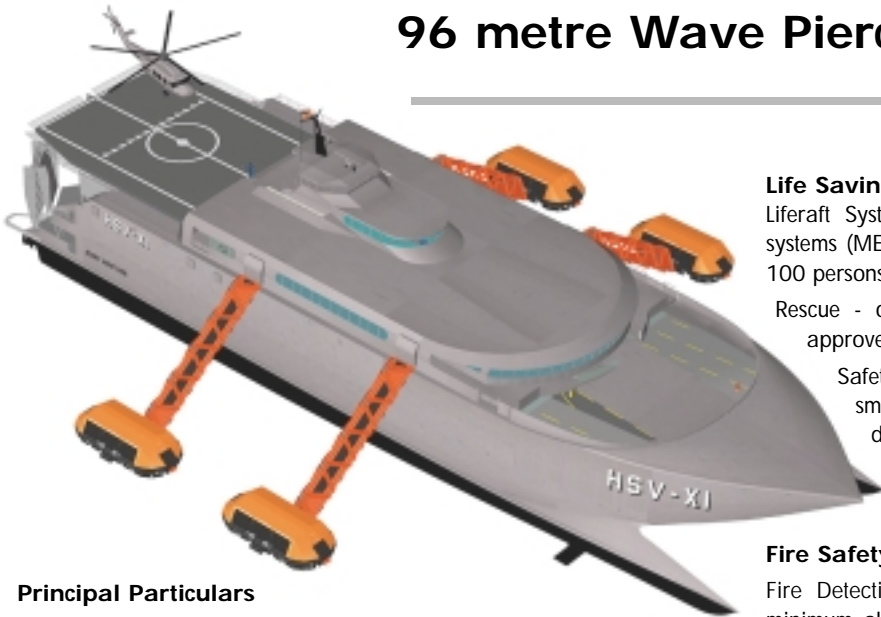
The vessel, *Joint Venture* HSV-X1 was designed and built by the Australian shipbuilders, Incat Tasmania Pty Ltd. To meet the military's requirements, the 96 metre (313 feet) vessel underwent six weeks of technical and structural modifications, emerging from Incat's Wilson's dry dock ready for the task ahead. Those modifications included the building and installation of a helo-deck suitable for large military helicopters such as the SH-60 Seahawk and the CH-46 Sea Knight. A two-part hydraulically operated vehicle ramp that allows rapid loading and discharge of vehicles from the stern or alongside was also designed and constructed by Incat to meet military specifications, as well as an internal refit and modification to equip *Joint Venture* for troop transportation.

TACOM, the Tank-Automotive and Armament Command of the U.S. Army, will use the high-speed craft to demonstrate its ability to perform specific mission scenarios and limited operational experiments, to move troops, heavy military vehicles and equipment as required by the U.S. military and Coast Guard.

The U.S. Navy and Coast Guard will work with the U.S. Army, who have contracted the Incat ship, reviewing the innovative technology as a complement to their existing amphibious force ships.

JOINT VENTURE HSV-X1

96 metre Wave Piercing Sealift Catamaran



Life Saving and Evacuation

Liferaft Systems Australia has supplied 4 X marine evacuation systems (MES) with each MES serving 100 persons. An additional 100 persons liferaft is also installed for reserve capacity

Rescue - one inflatable rescue dinghy with 30 hp motor and approved launch / recovery method.

Safety Equipment – lifejackets, lifebuoys with lights and lines, smoke flares, immersion suits, flares and line throwing devices fitted in accordance with international regulations.

Fire Safety

Fire Detection - an addressable fire detection system covers at minimum all high and moderate risk spaces with an alarm panel situated in the wheelhouse.

Close Circuit Television - system covers at a minimum, engine rooms, ante rooms, vehicle spaces, jet rooms, MES and liferaft stations with monitors in the wheelhouse.

Fire Sprinklers - Vehicle deck and passenger cabin are protected by drencher systems with overhead sprinklers. Pump control is from the wheelhouse and anterooms.

General Equipment - Portable fire extinguishers, fireman's outfits and equipment, water fog applicators, breathing apparatus, international connections and fire control plans are fitted in accordance with international regulations.

Machinery Installations

Main Engines - 4 x resiliently mounted Caterpillar 3618 marine diesel engines rated at 7200 kW at 100% MCR.

Water Jets - 4 x Lips 150D waterjets configured for steering and reverse.

Transmission - 4 x Reintjes gearboxes, with reduction ratio suited for optimum jet shaft speed.

Ride Control - A 'Maritime Dynamics' active ride control system is fitted to maximise passenger comfort. The system combines active trim tabs aft and bolt-on T-foils located at the forward end of each hull.

Electrical Installations

Alternators - 4 x Caterpillar 3406B 230 kW (nominal) marine, brushless self-excited alternators.

Distribution - 415/240V, 50 Hz distribution for ship's services via main switchboards in anteroom and distribution boards adjacent to or within the space they serve plus 220/110V 60 Hz for C4ISR and other military applications.

Principal Particulars

Designer	Incat Tasmania Pty Ltd
Builder	Incat Tasmania Pty Ltd
Certification	DNV +1A1 HSLC R1 Car Ferry "B" EO
Length overall	95.47 metres (313' 0")
Length waterline	86.00 metres (282' 2")
Beam	26.60 metres (87' 4")
Beam (hulls)	4.50 metres (14' 9")
Draft	3.67 metres (12' 0")
Speed	approx 38 knots (operational) approx 48 knots (lightship)

*Note - All speeds quoted at 100% MCR (4 x 7,200 kW)

Capacities

Deadweight	- 740 tonnes (815 short tons)
Crew accommodation	- up to 45 personnel
Transient personnel berths	- up to 48 personnel
Seating capacity	- 363 total persons including crew
Deck Capacity	- 375 sqm at 4.65 m clear height (4036 sqft at 15' 3" clear height) - 809 sqm at 4.00 m (min) clear height (8078 sqft at 13' 1" clear height) - 1008 sqm at 2.0 m clear height (10850 sqft at 6' 6" clear height)

Helicopter Deck – 24.7 m x 19.5 m (81' long x 64' wide) certified to Level III VMC Class 3 (landing) and Level III VCM Class 4 (VERTREP)

Fuel Capacity - 175,000 litres in integral aluminium day-tanks plus additional 392,800 litres capacity in long-range tanks.

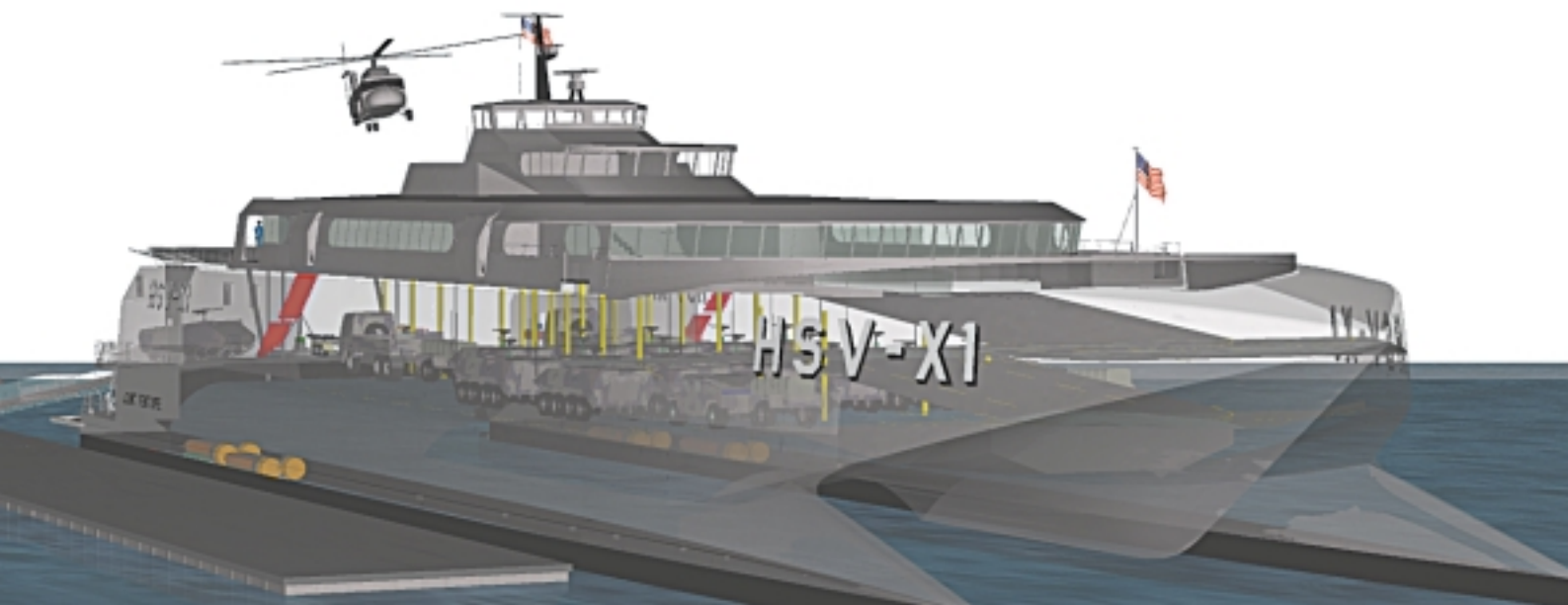
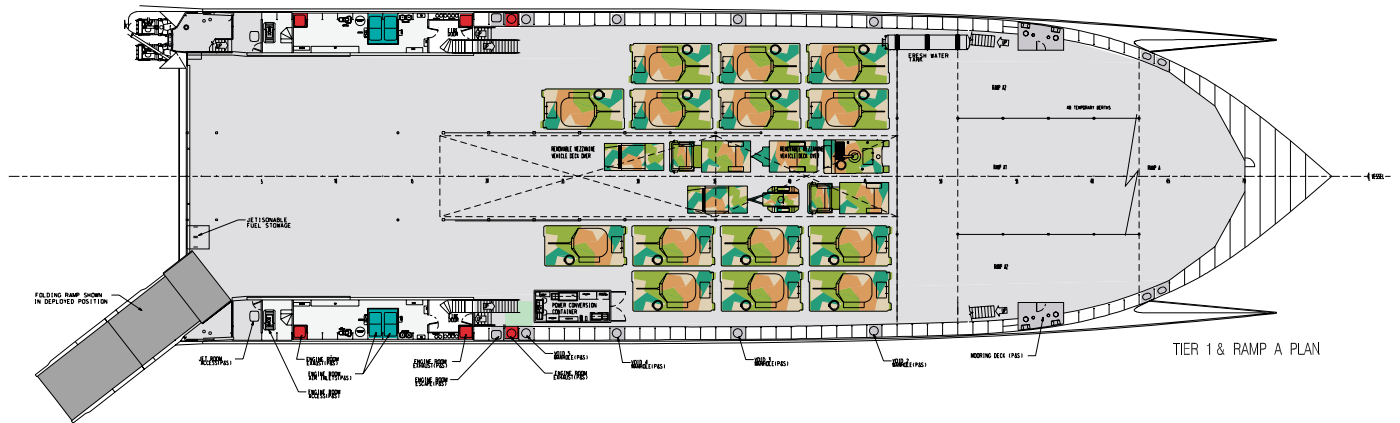
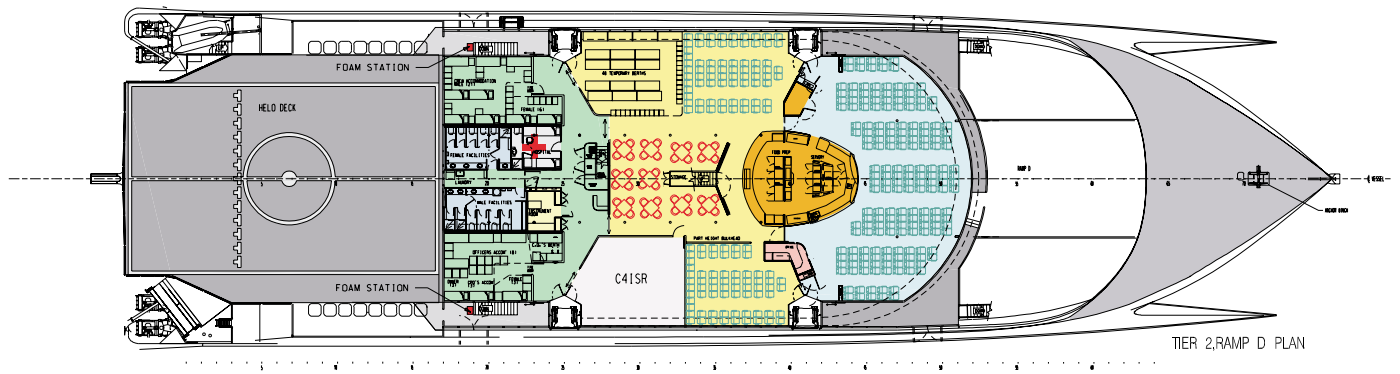
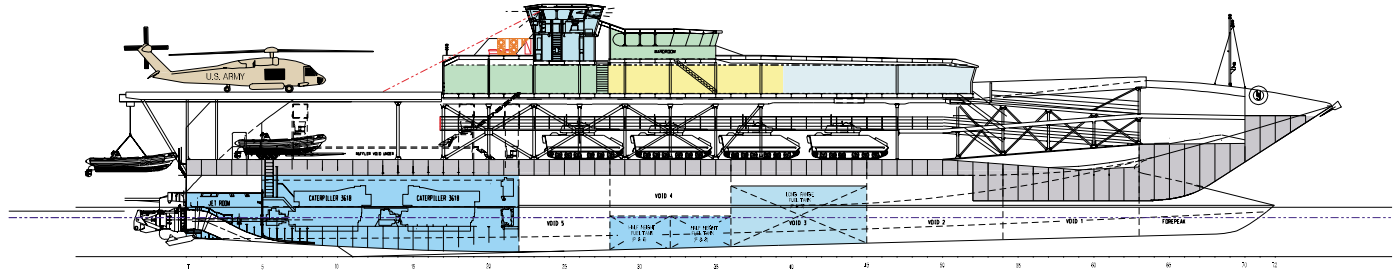
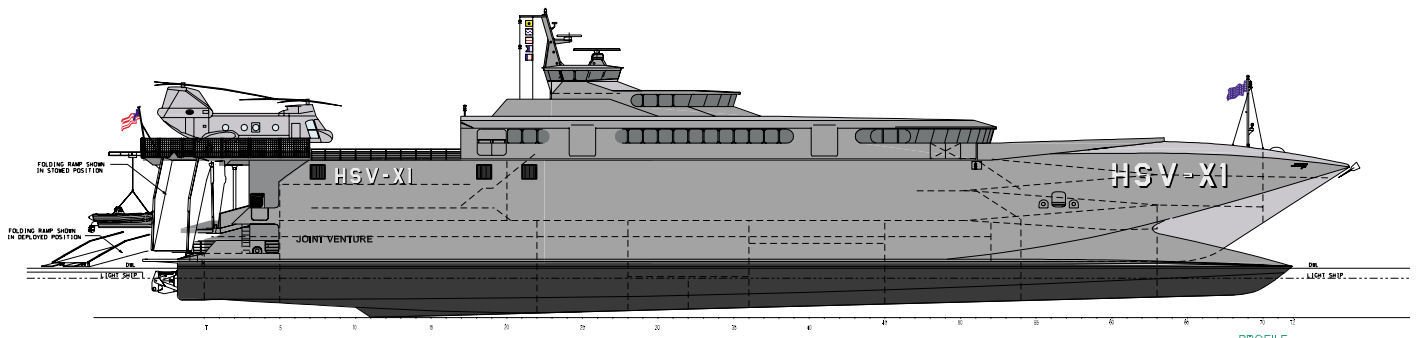
Fresh Water - 11,300 litres plus 4,500 litres/day water-maker

Construction

Design - Two slender, aluminium hulls connected by a bridging section with center bow structure at the forward end. Each hull is divided into nine vented, watertight compartments divided by transverse bulkheads. Three compartments in each hull prepared for fuel tanks.

Construction - Welded aluminium construction using predominantly aluminium grade of 5383 H321 or H116 and extrusion grade 6082 and 5083. Longitudinal stiffeners supported by transverse web frames and bulkheads.







BOLLINGER / INCAT USA, L.L.C.

The equator is no divide when it comes to combining the technological skills, experience, enthusiasm and desire of Bollinger Shipyards Inc., Lockport LA and Incat Tasmania Pty Ltd of Hobart Australia.

Bollinger's humble beginnings commenced in South Louisiana. With similarities to Incat's Tasmanian shipbuilding heritage, Bollinger's origins on the banks of Bayou Lafourche in the small South Louisiana town of Lockport, has seen boat building skills remain a legacy, which are being passed down from one generation to another in the Bollinger family.

Mr Donald G Bollinger and his brothers established the Bollinger operations as a small machine shop with four employees, in Lockport Louisiana in 1946. The second generation of the family business commenced in 1972 when Mr Donald Bollinger's son, Boysie, became an integral part of the shipyard.

The company, strategically located throughout Louisiana and Texas, with direct access to the central Gulf of Mexico, currently operates fourteen shipyards. Bollinger provides a variety of dry-docks and services for rigs and shallow and deepwater vessels, with their 42 docks ranging in capacity from 100 tons to 22,000 tons.

The company has enjoyed growth in all areas and, in 1981 the first government contract was secured for the building of small tugs to be used during the Panama Canal construction. In 1984 during the worst energy downturn in history, Bollinger secured their first of what was to be many United States Coast Guard (USCG) projects.

Today, Bollinger provides marine repair and conversion services, together with new construction of a wide variety of small to medium-sized offshore and inland vessels, to serve the energy, commercial and government marine markets in the Gulf of Mexico, USA region.

Similarities between Bollinger and Incat are numerous. Both companies support a "family" corporate culture, and with each being privately owned, neither is restricted by large corporate constraints. This allows the flexibility and freedom to respond to customer needs more efficiently and faster than their competitors. Whether individually or as part of the Bollinger / Incat team, each company holds the same dedication to training, high quality work and professionalism.

Incat, a younger company than Bollinger, is equally aggressive in its growth and innovation. Necessity being the mother of invention, the Incat group evolved from fishing boat constructions, and the building and operation of ferry boats from as early as 1972. The company gained prominence after the 1975 Tasman Bridge collapse, the sole bridge linking the eastern and western shores of Hobart. In the two years it took to repair the bridge, the Bushranger Fleet of ferries transported more than 9 million passengers.

The first catamaran, constructed of steel, was built by the company in 1977. Even though, as Incat Chairman Robert Clifford quotes, "ugly as sin", *Jeremiah Ryan* (001) still operates on Hobart's Derwent River today. Following the reopening of the bridge Incat turned its focus to the construction of fast ferries. The company commenced specialisation in aluminium construction as aluminium catamarans were clearly seen to offer better performance than the conventional steel approach.

In 1983, the concept of a Wave Piercing design was conceived and an 8.7 metre prototype *Little Devil* (013) was built. The successful trial results encouraged Incat to proceed with a 28 metre Wave Piercing Catamaran, *Spirit of Victoria* (016), which has been in commercial operation since mid 1985.

In 1989 the Incat yard moved to its current location at Prince of Wales Bay, and today employs a workforce of almost 1000 people. Incat's new breed of vessels, including the 98 metre, fast, efficient, aluminium Wave Piercing Catamarans, capable of carrying in excess of 900 passengers and a mix of highway vehicles, are designed on site at the design@incat office.

Incat, the culmination of three decades in the shipbuilding industry, has designed and built the current and previous two holders of the Blue Riband of the Trans Atlantic, The Hales Trophy.

Bollinger and Incat each have a simple goal, 'to improve the breed', and in doing so have pioneered many technological advances. Those advances ensure that the new strategic alliance, Bollinger / Incat USA, L.L.C. will remain the market leader in the production of fast military/vehicle/passenger high speed craft.

For further information please contact:

• Incat Australia Pty Ltd: www.incat.com.au • Bollinger Shipyards, Inc.: www.bollingershipyards.com

• Bollinger / Incat USA: www.bollinger-incatusa.com